

REMARKS

The Applicants request reconsideration of the rejection.

Claims 1, 3-4, 6-7, 9-10, 12-16, 18 and 19 remain pending.

Claims 1, 3-4, 6-7, 9-10, 16 and 18-19 stand rejected under 35 U.S.C.

§103(a) as being unpatentable over Numata, U.S. Patent No. 5,954,669 (Numata).

The Applicants traverse as follows.

Although Numata seems to disclose that a search condition (seed document) and an object document are compared sentence-by-sentence, Numata aims to find the desired content of interest in a pinpointing manner, in the sense of relating specifically the seed text to the sentences examined in the object document. On the other hand, the present invention features the calculation of an inclusion degree which indicates more than a simple comparison between the seed text and the object document text. Rather, the inclusion degree indicates the relevancy of the related contents throughout the object document. In other words, the inclusion degree indicates whether the content of the search condition is locally provided in the object document or whether it is provided throughout the object document. The inclusion degree is not disclosed by Numata.

The Applicants note the Examiner's reference to Numata's discussion of the prior art in col. 1, lines 39-54, but this disclosure is not specific to the calculation of the inclusion degree as required by claim 1, particularly as amended above.

Specifically, the mere disclosure of "the degree of similarity between the query and the document" is so broad as to refer generally to the degree of similarity between any query in the document, and does not point to the partitioning of a document into blocks, the determining of blocks that meet a predetermined condition of similarity, or

the calculation of a ratio of such determined relevant blocks to the number of blocks overall. In short, the person of ordinary skill would never learn of the inventive inclusion degree calculation based on this passage of Numata. Further, Numata's comparison of the query vector and composite vectors, displayed on display section 31 along with the structural elements of corresponding retrieval units (disclosed in col. 33, lines 17-27) does not mention anything corresponding to the claimed inclusion degree, and in fact, does not teach the output for display of two associations relating to the object document, but only the association between the structural elements and the degree of similarity.

To emphasize the distinction, independent claim 1 has been amended to recite the step of "calculating, as an inclusion degree for each object document a ratio of the number of blocks that are judged as satisfying said predetermined condition to the total number of the plurality of blocks resulting from the partitioning of the object document." Further, claim 1 now recites the step of "outputting for display a list of object documents showing each object document in association with the calculated inclusion degree therefor and in association with the similarity of each listed object document as a whole to the seed text." The amended calculating step reflects equation (2) found on page 14 of the present specification (paragraph [0048] of the published application), and emphasizes that the inclusion degree is an indicator that indicates how evenly the content of the search condition (seed text) is provided throughout the object document as whole. The inclusion degree thus provides a deeper indication of the relevancy of the object document to the search condition than simply relying on the similarity of each block to the search condition, in contrast to a prior technique that applies the search condition to the blocks of the

object document individually, and scores the similarity of the search condition to the object document as a whole on the basis of the quality of "hits". A misleading relevancy score can result by this prior technique when a relatively small number of high-quality hits occurs which, on balance over the entire document, results in a high relevancy score even though much of the object document may reflect zero hits.

The inclusion degree employed by the present invention, on the other hand, scores each block individually and totals the number of blocks deemed relevant (that is, the number of blocks that satisfy the predetermined condition). The calculating step then calculates the ratio of such relevant blocks of the total number of blocks of the partitioned object document, providing another measure of similarity or relevancy for the object document to the search condition. The outputting step thus provides a telling display of the relevancy of the object document by showing each object document in association with the calculated inclusion degree (thereby showing the degree to which the search condition is found throughout the entire object document), and also in association with the similarity of the object document as a whole to the seed text (based on the calculated similarity of each block to the seed text). It is this inclusion degree that is not suggested by Numata. Further, it is the combination of the inclusion degree and the similarity of the document as a whole to the seed text that Numata does not display.

The remaining independent claims have been amended similarly. The Applicants note in this regard that claim 10 is not limited by a seed text as a search condition, and thus the above discussion should be understood to relate broadly to the similarity and relevance between a search condition which is not necessarily limited to a seed text.

Concerning the Examiner's finding that Numata discloses the claimed full-text search condition, a similar argument can be made to that above. The invention defined in claims 4, 9 and 19 acquires a full-text search condition, analyzes the acquired full-text search condition, and calculates, as a full-text search condition relevancy, a ratio of a number of relevant min terms satisfied by characteristics strings of each block to a number of total min terms included in the full-text search condition. Further, the invention judges whether or not the calculated similarity satisfies the first predetermined condition and whether or not the calculated full-text search condition relevancy satisfies a second predetermined condition, and calculates as the inclusion degree, a ratio of the number of blocks that are judged to satisfy the first and second predetermined conditions to the total number of blocks of the object document. Therefore, by extending the inventive inclusion degree to the full-text search condition, the invention is further distinguishable from Numata.

Claims 12-15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Numata in view of Caudill et al., U.S. Patent No. 6,766,316 (Caudill). The Applicants traverse as follows.

Dependent claims 12-14 are derived from claim 1, which is patentable as demonstrated above. Therefore, these claims inherit the patentability of claim 1. Claim 15 is dependent from independent claim 3, which is also patentable as demonstrated above. Claim 12 is separately patentable, as claiming a variation of the method of the block similarity calculation to a seed text. Specifically, claim 12 requires the steps of extracting character strings from the acquired seed text, and extracting character strings from each block of the object document. Thus, according to claim 12, the similarity of each block of the object document to the seed

text is calculated by comparing the character strings extracted from each block with the character strings extracted from the seed text. It is this similarity that is used in calculating the similarity of the object document as a whole to the seed text, according to claim 12 via claim 1. Further, it is this similarity that underlies the judgment as to whether each block satisfies the predetermined condition, so as to determine the inclusion degree. Neither Numata nor Caudill addresses this feature of the invention. Indeed, Caudill never addresses an inclusion degree at all, and thus even in combination with Numata, the invention defined in claim 12 would not be obvious to the person of ordinary skill in the art.

Claim 15 further limits claim 4, discussed above, by applying the calculation of the block relevancy degree to the full-text search condition, while employing the characteristic strings extracted from each block and from the full-text search condition. Thus, claim 15 provides separate patentability for reasons similar to those argued above with regard to claim 12.

In view of the foregoing amendments and remarks, the Applicants request reconsideration of the rejection and allowance of the claims.

To the extent necessary, the Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to

the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 500.43154X00).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.

/Daniel J. Stanger/
Daniel J. Stanger
Registration No. 32,846

DJS/sdb
(703) 684-1120